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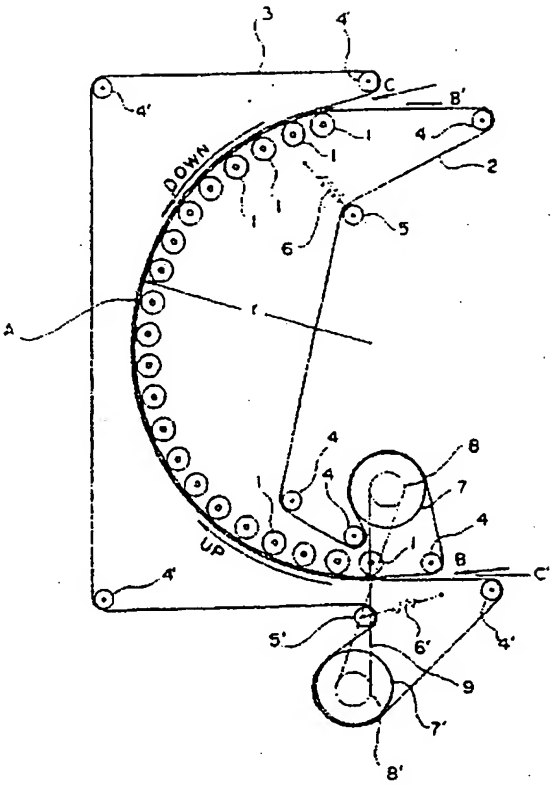
TITLE : UP AND DOWN CONVEYOR



ABSTRACT : PURPOSE: To simplify constitution and to prevent contact of works with each other, by a method wherein, in a title conveyor used in a hamberger making process, two annular endless belts are run along a guide means in a condition in that variable tension is exerted thereon, and the works are conveyed in a manner to be held between the nip formed by the belts.

CONSTITUTION: With a driving pulley 7 rotated clockwise and a pulley 7' rotated counterclockwise, belts 2 and 3 are superposed with each other and driven in the UP direction of an arrow mark along roller groups 1. Thus, UP conveyance can be effected by feeding the works between the belts 2 and 3 as shown by an arrow mark B. In which case, application of tension by means of a tension pulley 5' is regulated depending upon the shape and the weight of the work through the force of a spring 6. Reversing of the rotation direction of the driving pulleys 7 and 7' enables to perform DOWN conveyance. This constitution permits selection of UP and DOWN conveyance of the works without contact of the works with each other through simple constitution.

I CLAIM:

1. A conveyor system comprising:
   (a) an inlet;
   (b) an outlet
   (c) a first endless conveying element having a contact surface and configured to transport at least one object along a transportation path from proximate the inlet to proximate the outlet; and
   (d) securing means for securing the at least one object to the contact surface along a secured portion of the transportation path.
2. The conveyor system of claim 1, wherein said secured portion of the transportation path includes a substantially vertical portion.
3. The conveyor system of claim 1, wherein the securing means comprises a securing portion of the first endless conveying element having a securing surface configured to be moveable to proximate the contact surface, wherein the at least one object is positioned between the securing surface and the contact surface.
4. The conveyor system of claim 1, wherein the securing means comprises a second endless conveying element having a securing surface and configured to maintain its securing surface proximate the contact surface of the first endless conveying element for at least said secured portion, wherein the at least one object is positioned between the first conveying element and the second conveying element.
5. The conveyor system of claim 4, further comprising at least one main guide element for directing the first and second endless conveying elements along said secured portion of the transportation path.
6. The conveyor system of claim 5, wherein the at least one main guide element comprises at least one main guide roller.
7. The conveyor system of claim 6, wherein the at least one main guide element comprises a second main guide roller.

8. The conveyor system of claim 5, wherein the main guide element comprises a plurality of rollers.

9. The conveyor system of claim 8, wherein the plurality of rollers are each approximately the same size.

10. The conveyor system of claim 6, wherein the main guide roller is configured to be sufficiently large relative to the at least one object to avoid damaging the object.

11. The conveyor system of claim 1, further comprising a drive mechanism for driving the first endless conveying element.

12. The conveyor system of claim 11, wherein the drive mechanism is configured to drive the second endless conveying element at approximately the same speed as the first endless conveying element.

13. The conveyor system of claim 1, wherein the inlet is positioned proximate a first height and wherein the outlet is positioned proximate a second height which is different from said first height.

14. The conveyor system of claim 1, wherein the secured portion is substantially curvilinear.

15. A conveyor system comprising:

(a) an inlet;

(b) an outlet

(c) a first endless conveying element having a contact surface and configured to transport at least one object along a transportation path from proximate the inlet to proximate the outlet; and

(d) a second endless conveying element having a securing surface positioned adjacent the contact surface along a secured portion of the transportation path so that the at least one object is secured between the first and second conveying elements, along the secured portion of the transportation path.

16. The conveyor system of claim 1, wherein said secured portion includes a substantially vertical portion.

17. The conveyor system of claim 15, further comprising a tensioner for maintaining tension in the first conveying element.